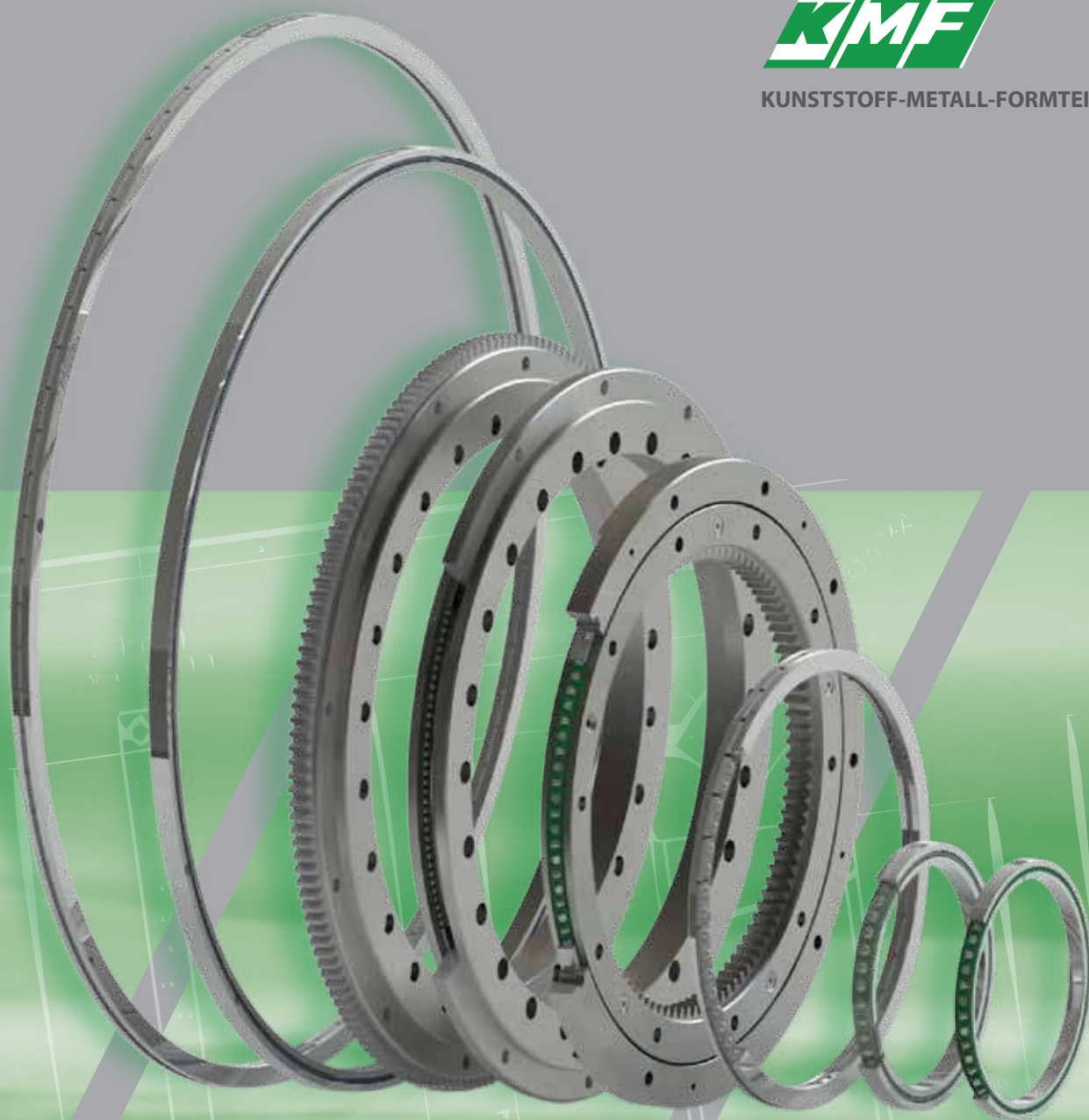




KUNSTSTOFF-METALL-FORMTEILE

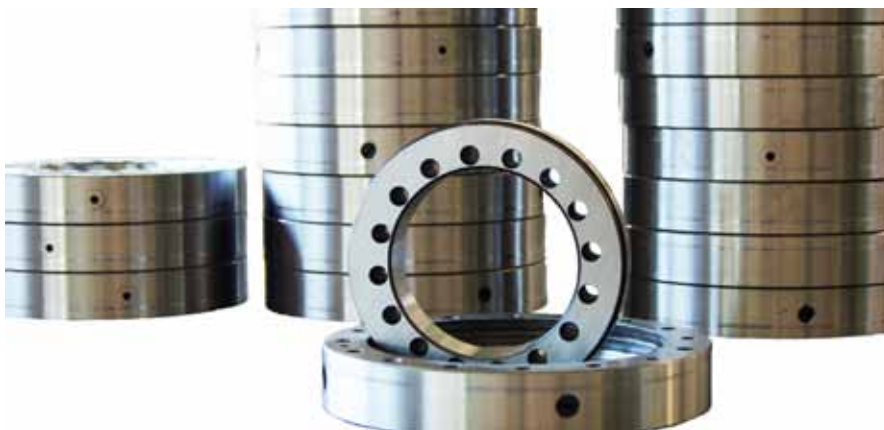


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SLIM-SPLIT-BEARING

This catalogue presents all SLIM-SPLIT-BEARING products of our company. The name SLIM-SPLIT-BEARING results due to the splitted or opened bearing rings. Various bearings with various shapes and cross-cuts are available. All of them are manufactured with most modern and self-developed manufacturing methods. These bearings are manufactured at the company KMF – Kunststoff-Metall-Formteile under consideration of highest precision, quality and repeatability.



KUNSTSTOFF-METALL-FORMTEILE

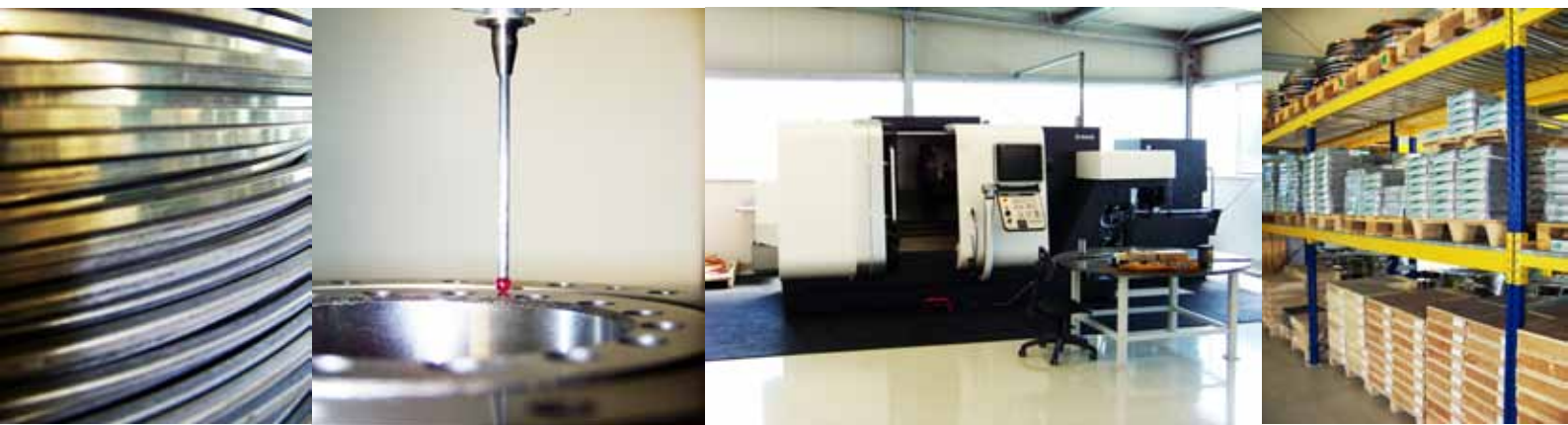


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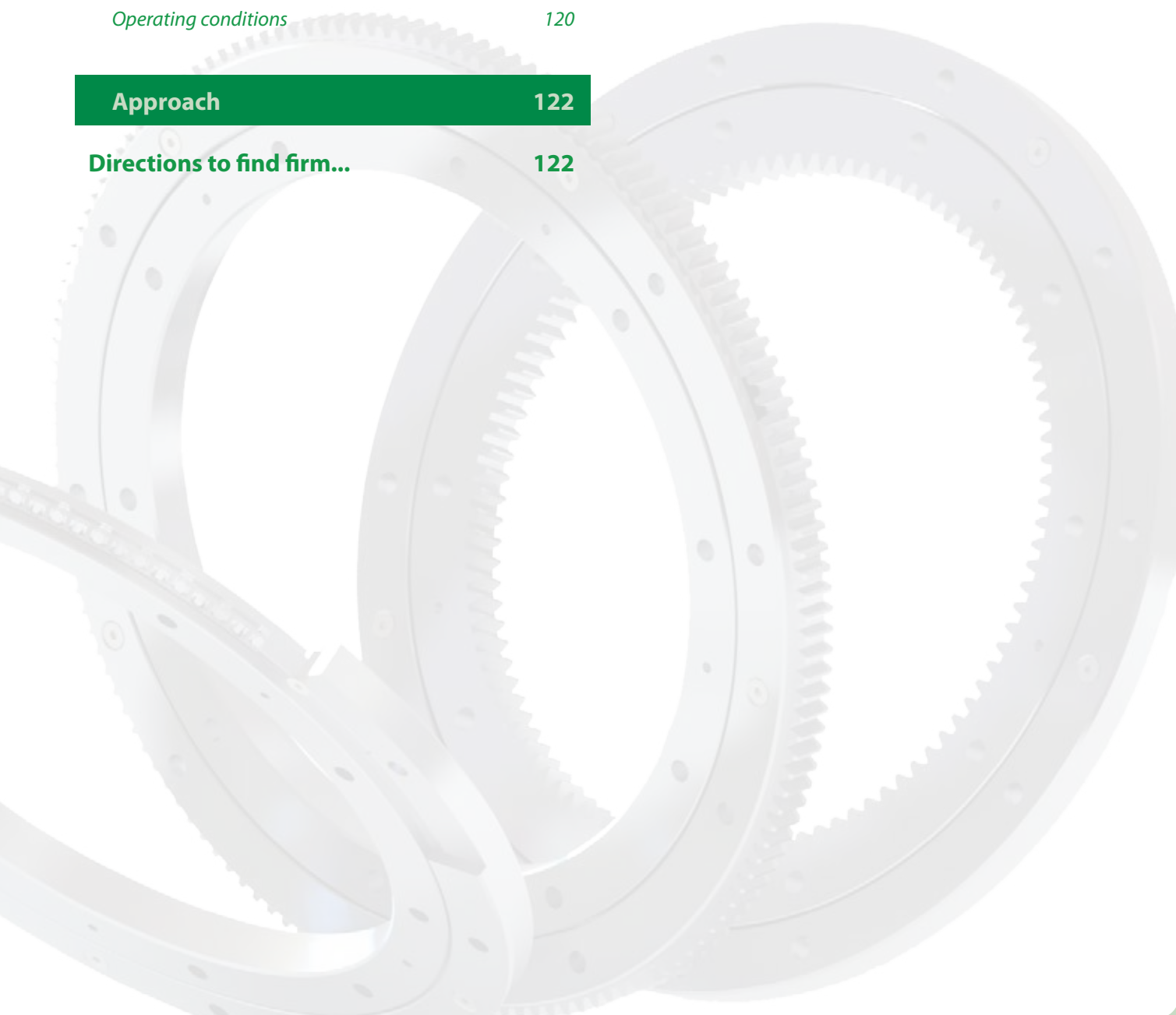
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SLIM-SPLIT-BEARING

Thin ring bearing PBXS
3,175 x 3,175



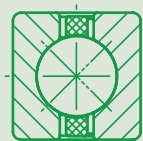
Thin ring bearing PBXU
4,5 x 4,5



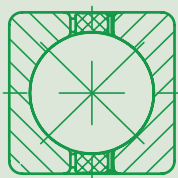
Thin ring bearing PBXA
6,35 x 6,35



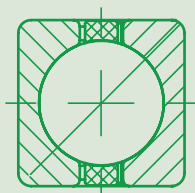
Thin ring bearing PBXC
9,525 x 9,525



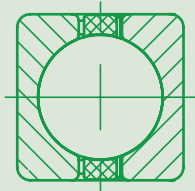
Thin ring bearing PBXD
12,7 x 12,7



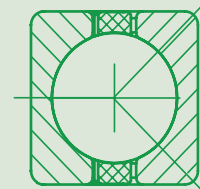
Thin ring bearing PBSD
12,7 x 12,7



Thin ring bearing PBCD
12,7 x 12,7

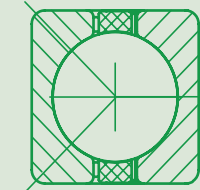


Thin ring bearing PBXCD
12,7 x 12,7

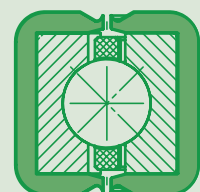


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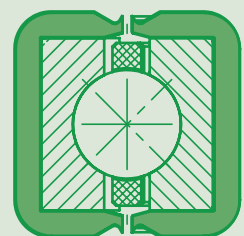
Thin ring bearing PBCXD
12,7 x 12,7



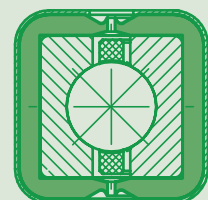
Whisper-Thin ring bearing PFXC
12,325 x 12,325



Whisper-Thin ring bearing PFXC
16,1 x 16,1



Sleeve-Whisper-Thin ring bearing HFXD
12,925 x 12,925



Example of calculations for combined static strength and nominal service life



Technical description

Description of shape

A thin ring bearing generally means a single-row bearing, which has independent of the bore diameter stable quadratic cross-cuts within one type series. The main characteristic features of these bearings are their extremely thin-walled bearing rings.

The KMF SLIM-SPLIT-BEARING is a four point contact ball bearing, which is able to take loads from all directions, such as axial, radial and moment loads, due to the pressure angle of 90°.

The bearing rings are manufactured by a special manufacturing process, which profiles, hardens and bends the rings in one single operation without any mechanical work. The bearing rings are not closed, but remain opened. That's why they have characteristics of wire ball bearing insert elements, but it is more easy to assemble complete units.

The opened bearing rings enable the integration of a cage strip with held and guided balls. A raceway system with more and bigger balls could be realised. Compared with the "classic" thin section bearings, higher static and dynamic load capacities can be achieved.

Materials

The KMF-SLIM-SPLIT-BEARINGS are manufactured in stainless steel. Bearing rings and balls are made of stainless and acid-resistant steel X46Cr13 (material No. 1.4034). The cage strip is made of Polyamide 12.

Operating conditions

The temperature limits of the standard bearing in continuous operation are -40°C and +100°C, for short periods up to +120°C. For special applications with higher temperatures or for example in clean room, vacuum or medic technical different options are possible; ceramic balls or additional cage alternatives with different materials like Teflon, PEEK, PTFE or PVDF are also available.

Sealing

The KMF-SLIM-SPLIT-BEARING is not sealed.

If a sealing system is necessary, it can be integrated directly in the surrounding construction. Alternatively to conventional sealing systems in the market, KMF offers profile seals as yard-goods made of Perbunan in many different styles and shapes. (see page 86 Accessoires – Sealing Profiles).

Thin ring bearing

PBXU
PBXA
PBXC
PBXD



Bearing Cross-Cuts

The KMF-SLIM-SPLIT-BEARING can be offered in the following cross-cuts:

Cross-cuts		KMF-type
Short sign	Dimensions	
S	3,175 x 3,175 mm	PBXS
U	4,5 x 4,5 mm	PBXU
A	6,35 x 6,35 mm	PBXA
C	9,525 x 9,525 mm	PBXC
D	12,7 x 12,7 mm	PBXD
↪	12,7 x 12,7 mm	PBSD
↪	12,7 x 12,7 mm	PBCD

KMF can supply all bearing types of the complete diameter range of each type series within short terms. Also all other dimensions beneath the preferred series can be supplied within short terms as well.

Features

- Free choice of material of the connecting parts, e. g. aluminium
- The splitted bearing rings eliminates functional difficulties based on different material expansions, e. g. different material combinations as light metal steel and cast iron
- Corrosion resistant and low maintenance
- High static and dynamic Basic load ratings
- High durability
- High rigidity
- Low Mass
- Easy to install and economical mounting and dismounting, as special fixtures are not necessary
- Dimensions beneath preferred series can be supplied within short terms

